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# MARKETING ACTIVITIES

Marketing Margins  
for White Bread





Mike, our young man on the cover, is one of the better customers of the baking industry. During the past year, Mike consumed about 180 pounds of bakers' white pan bread as compared with the U. S. per capita average of 72 pounds. Actually, Mike only consumed a little more than 2 bushels of wheat, as a bushel of wheat yields enough flour to make about sixty-six 1-pound loaves of white bread. Of the 17.7 cents average price paid for white bread by Mike's mother during 1955, the farmer got 3.1 cents; miller, baker, and other handlers, 11.7; and retailer, 2.9. Story on page 8.

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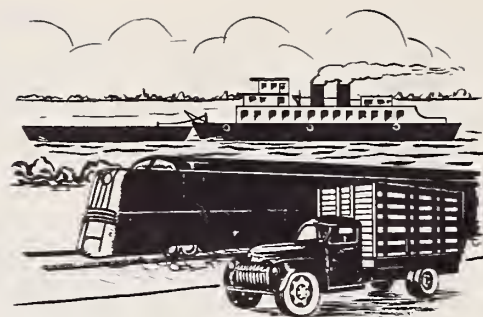
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# Transportation Charges Are Up Everywhere



By Ezekiel Limmer

Charges for shipping agricultural and nonagricultural products are now higher than they were several months ago. This is true whether products are shipped by railroad, rail express, freight forwarder, ship, truck, or barge. It is also true for transportation charges in practically all parts of the United States.

The increases in transportation charges are larger for commodities requiring nonmechanical refrigeration (such as fresh fruits and vegetables, poultry, meat, and dairy products) than for commodities not requiring this protection. Refrigeration charges for movement by railroad and rail express have risen, on top of the increases in the regular charges of these carriers.

## Railroad, Water Carrier, and Freight Forwarder Rates

The Interstate Commerce Commission has approved higher freight rates for railroads, water carriers, and freight forwarders--effective March 7, 1956. For most commodities, the increases amounted to 6 percent. However, for some--including most agricultural products--the increases were smaller, at least on certain hauls, as shown here:

Grain, grain products, grain byproducts, and articles taking the same rates; livestock, fresh and processed meats, and packinghouse products...an increase of 5 percent.



Fresh fruits and vegetables (excluding cold pack or frozen), melons, edible nuts, and canned or preserved food products (not cold pack or frozen) in packages...an increase of 6 percent, but not to exceed 6 cents per 100 pounds.

Sugar (beet, cane, corn, invert, liquid, sorghum, and wheat) and sirup, grain unmixed (glucose)...an increase of 6 percent, but not to exceed 5 cents per 100 pounds.

Charges for hauling milk and cream in passenger trains were raised by 6 percent. This is the typical rail method for hauling these products.

This new general increase is the 12th actual rise in railroad freight rates granted by the ICC during the last 10 years. It followed by only 3 months the effective date on which the previous general increase authorized by the ICC was made permanent. That increase, granted on a temporary basis in 1951 and 1952 and extended once (on a temporary basis), was made permanent as of December 1, 1955. It amounted generally to 15 percent.

Estimates indicate that the latest increase lifted the level of rates on agricultural products by an average of almost 5 percent. Agricultural rates are now over 70 percent above the 1945 level. Largest increases have been in rates on livestock and meats, about 90 percent. Other percentage increases in railroad freight rates from the 1945 level for agricultural products are: Wheat, 76; cotton, 74; and fresh fruits and vegetables, 54 percent.

In addition, the ICC recently authorized a 15 percent increase for railroad refrigeration charges for shipments in nonmechanical refrigerator cars. The charge for salt used in refrigeration was permitted to rise from \$0.99 to \$1.04 per 100 pounds.

### Railway Express Rates

Railway express rates have been increased by 6 to 10 percent. The following table shows the increases for agricultural products moving under commodity rates and for class rate groups which include some agricultural products in small lots:

Commodity or class	:	Size of shipment	:	Effective date (1956)	:	Percentage increase
Fruits, vegetables, meat;	:		:		:	
dressed poultry and	:		:		:	
lamb, fish, and	:		:		:	
selected plants	:	Carload	:	April 16	:	7
Fruits and vegetables	:	Less than carload	:	May 1	:	10
Dairy products	:	same	:	April 17	:	6
Cut flowers	:	same	:	May 1	:	10
Classes 1 and 2	:	same	:	March 20	:	7

In addition, increases of 15 percent in refrigeration charges on perishables in express carload movements have been filed to become effective on April 17, 1956.



### **Truck Rates**

Truck rates under the jurisdiction of the ICC also have climbed recently. These increases generally amounted to 6 percent. They were made effective in March and April. Rates in all parts of the country were affected--from New England to the Pacific Coast, from the Canadian to the Mexican border.

The increases apply to most of the rates under ICC control. They are of interest to farmers because they generally apply to processed agricultural products and to things farmers buy. A large proportion of the unmanufactured agricultural commodities is hauled in the farmers' own trucks or by carriers which are exempt from ICC regulation as to rates, places served, etc.

Data is lacking to provide an accurate measure of the recent trend in rates charged by such exempt carriers. However, some increase in these rates generally follows a rise in competing rail rates.

### **Effects of Rate Increases on Transportation Tax**

Since 1942, there has been a tax on for-hire transportation equal generally to 3 percent of the amount of the charges. This tax applies to the charges (for example, refrigeration and heat), in addition to the movement of goods. The recent increases in charges by the several agencies of transport will result, of course, in increasing the amount of taxes paid.

# Cigarette Consumption Trends



By Stephen E. Wrather

Cigarette smokers in the U. S. spent an estimated \$4,675,000,000 during 1955 for their favorite brands. That's a new record for money spent for cigarettes during a year. But 1955 was not a record year for the number of cigarettes bought.

Last year, consumers purchased over 382,000,000,000 cigarettes, about  $3\frac{1}{2}$  percent more than 1954, but below the 1952 peak when consumers bought 394,000,000,000 cigarettes. Domestic consumption turned upward in 1955 after experiencing a decline in 1953 and 1954.

Higher prices per pack pushed expenditures for cigarettes to record heights. On the average, consumers paid about 3 percent more for a pack of cigarettes in 1955 than in 1954. Prices in 11 States increased due to higher taxes. Also, smokers who prefer king-size cigarettes generally paid more per pack when manufacturers raised prices in April 1955 for this size of cigarette.

Another factor raising the per unit price paid for cigarettes in 1955 was the sizable shift in demand to filter-tip cigarettes, which are higher priced than regular or king-size, nonfilter tip cigarettes.

## Regular, King Size, and Filter Tip

The cigarette market has changed rather drastically during the last 7 or 8 years. It has changed from a market consisting almost entirely of "regulars" to a 3-way market of "regulars," "king size," and "filter tips." This 3-way market has resulted in a substantial number of new brands and sizes of cigarettes. Several years ago, 3 of the leading brands accounted for over 80 percent of the total cigarette production. But it now takes the top 10 selling brands to equal this percentage.

The increase in sales of "filter tips" has been almost phenomenal. Estimates by trade analysts indicate that sales of "filter tips" jumped from 3 percent of the domestic market in 1953 to nearly 20 percent in 1955. During this period, some companies promoted "filter tips" very heavily. Then, too, the growth in demand for "filter tips" may have been made easier by the "cigarettes and health" controversy.

"Regular" size cigarettes, as a group, have experienced considerable shrinkage in sales volume. They now make up slightly over 50 percent of the domestic market. "King-size" brands account for the rest of the market; as a group, they have held their own in volume.

## Outlook for 1956

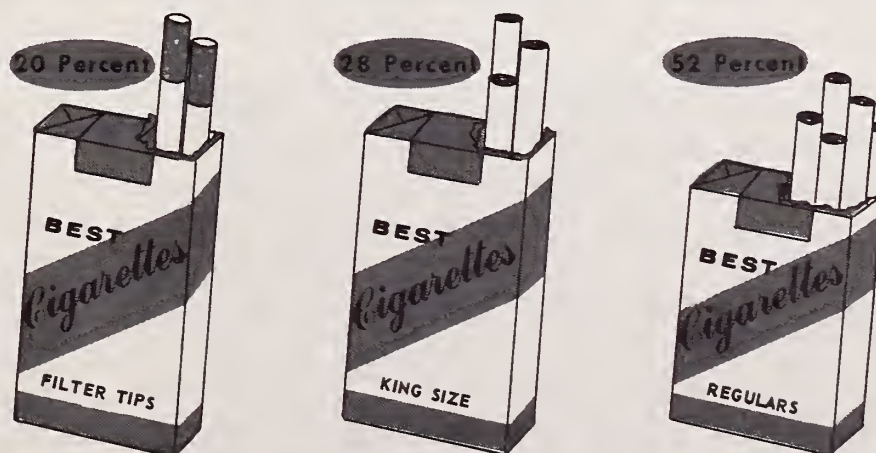
The 1955 upswing in cigarette consumption indicates that the health factor has subsided to a considerable extent. It seems reasonable to expect a gradual increase in consumption during 1956; some gain from increased population, some gain from new smokers. However, the number of potential smokers is increasing at a slower rate than total population; the number of persons in the 20-49 age group increased only 1 percent during the last 3 years, compared with 5 percent for the total population. The 20-49 age group is the most important age group in terms of percent of smokers and per capita consumption.

### Tobacco Leaf for Cigarettes

Growers of cigarette-type tobacco--flue-cured, burley, Maryland--have a very direct interest in the sales of cigarettes. It takes about 3 pounds of tobacco leaf (farm-sales-weight) to manufacture a thousand cigarettes. On this basis, 1 billion cigarettes require 3 million pounds of leaf. When the production of cigarettes fell almost 34 billion, between 1952 and 1954, the corresponding reduction in leaf requirements was about 100 million pounds.

Actually, inventory requirements were reduced by an amount considerably in excess of the 100 million pounds, since manufacturers age the tobacco for 2 to 3 years. But, when the demand for cigarettes trends upward, then manufacturers' leaf requirements are increased at a rate considerably in excess of that at which they are using up the tobacco.

The decline in leaf requirements for cigarettes occurred when growers were experiencing record-high yields per acre. Despite cutbacks in allotted tobacco acreages under the marketing quota program, flue-cured and burley moved rather quickly into a surplus position. These are the principal cigarette types. The upward trend in cigarette output during 1955 is encouraging. But acreage yields are still increasing. They will be an important factor in supply requirement adjustments.



Sales of cigarettes in United States, 1955.

# Marketing Margins for White B

Bread prices have risen every year since 1946. Consumers in 1955 paid an average price of 17.7 cents for a 1-pound loaf of bread--a new high--70 percent above the 10.4 cents paid in 1946. Most of the rise in retail bread prices since 1946 has come about as a result of cost increases at the bakery level. The rise took place without any significant changes in services rendered, such as have occurred in a number of other food items.

Based upon preliminary data, only 3.1 cents of the average amount--17.7 cents--paid by consumers for a pound loaf of white bread was returned to farmers for wheat and other ingredients of farm origin. The wheat farmer received about 2.7 cents of this amount compared with 2.1 cents in 1946 and 2.9 cents in 1947, the low and high years within the decade. Even if the farmer had donated his wheat, white bread would still have cost consumers about 14 cents per loaf.

The difference between the farm value of ingredients and their value at the bakery constitutes marketing charges covering storage, insurance, transportation, and milling and other processing. Over the decade these charges rose from 1 cent to 2 cents a loaf.

The bakery margin consists of the difference between the cost of ingredients and the selling price of bread to the grocer in the case of wholesale bakers or to consumers in the case of house-to-house, chainstore, and retail bakeries. The wholesale bakery accounts for the largest amount of baked goods.

It is estimated that white bread to grocery stores in 1955 cost 12.6 cents per pound. Deducting ingredients amounting to 5.1 cents leaves a margin of 9.7 cents.

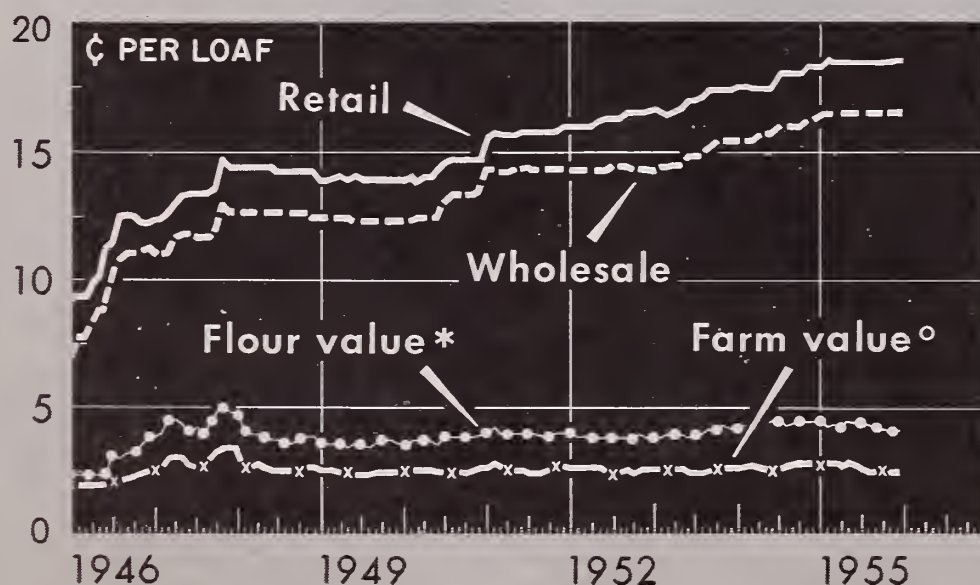
Other costs that make bread include: Wrappings, 1.70; payments to driver-sales expense which includes vehicle overhead, and loss from stationary and miscellaneous expenses, 2.52; and profit before

Vehicle expense and commission make the cost from a west-side city bakery store greater than that of wheat equivalent from western coast. At sales value the margin is estimated at approximately 4 to

The retail grocer receives on an average for his services a 5-cent margin on bread prices undertaken in trades of the baking industry. In general, the retail margin amount of regional variation. In general, the retail margin from California to the Southeast is the highest wholesale and retail in the Northeast States, the retail margin in the territory west of the

## WHITE BREAD PRICES

Av. New York, New Orleans, Chicago and San Francisco



Monthly data from BLS and AMS

\* Av. Prices at six markets converted to flour content in 1-lb. loaf

° Wheat content

## Where It Goes

### CONSUMER'S

Av. Price  
in 1955,  
17.7¢



\* Includes grain handling and transportation

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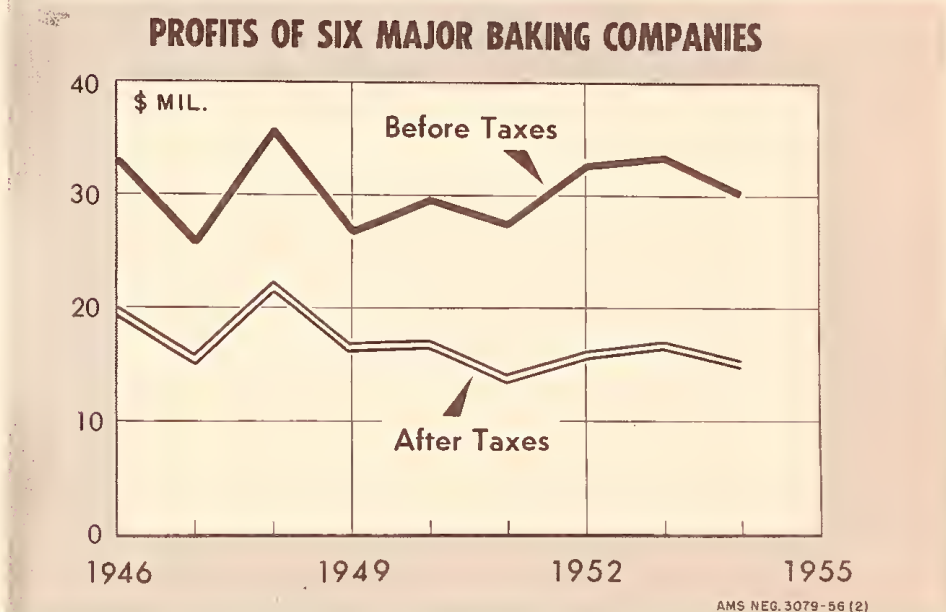
It is estimated that wholesale bakeries sold white bread to grocery stores in 1955 for approximately 14.8 cents per pound. Deducting from this the cost of ingredients amounting to 5.1 cents gives a wholesale bakery a margin of 9.7 cents.

Other costs that make up the wholesale price of bread include: Wrappings, 0.81 cent; production labor, 1.70; payments to driver-salesmen, 1.73; other selling expense which includes vehicle expense, advertising, overhead, and loss from stale bread, 2.11; administrative and miscellaneous expense, including purchased goods, 2.52; and profit before taxes, 0.83 cent.

Vehicle expense and a portion of the driver's commission make the cost of moving a loaf of bread from a west-side city bakery to an east-side grocery store greater than that of transporting by rail the wheat equivalent from western North Dakota to the east coast. At sales value the loss from staling is estimated at approximately 4 to 6 percent of revenue.

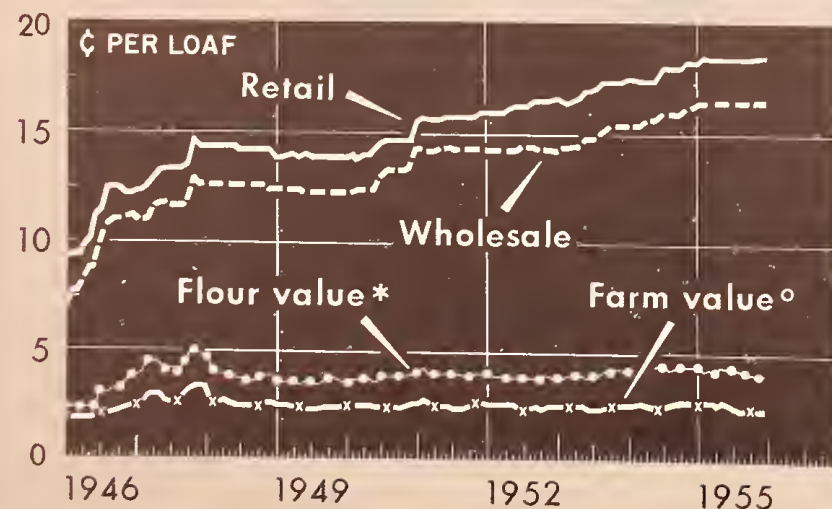
The retail grocer receives about 2.9 cents a loaf on an average for his services. A national survey of bread prices undertaken by a member of the allied trades of the baking industry indicates a certain amount of regional variation in the retailer margin. In general, the retail margin declines as one proceeds from California to the Southeastern States. Although highest wholesale and retail prices prevail in the Northeast States, the retail margin is not so high as in the territory west of the Mississippi.

Compared with 1946



## WHITE BREAD PRICES

Av. New York, New Orleans, Chicago and San Francisco



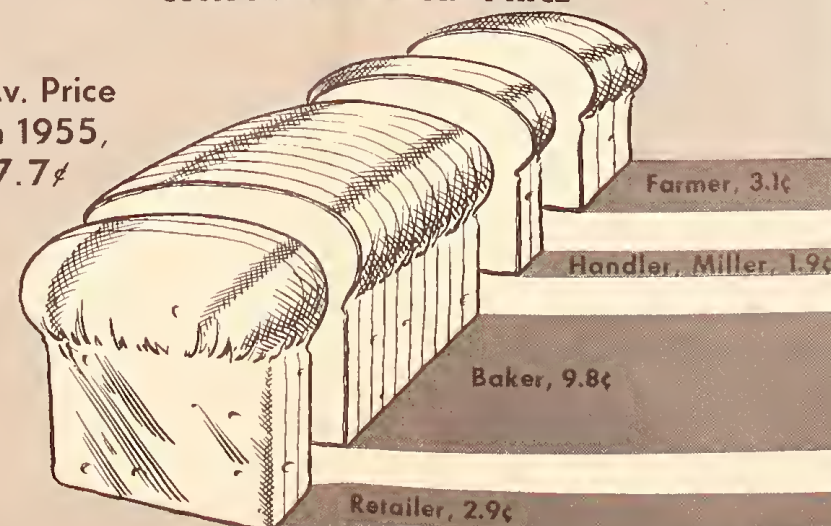
Monthly data from BLS and AMS  
\* Av. Prices at six markets converted to flour content in 1-lb. loaf ° Wheat content

AMS NEG. 1983-56 (2)

## Where It Goes

### CONSUMER'S BREAD PRICE

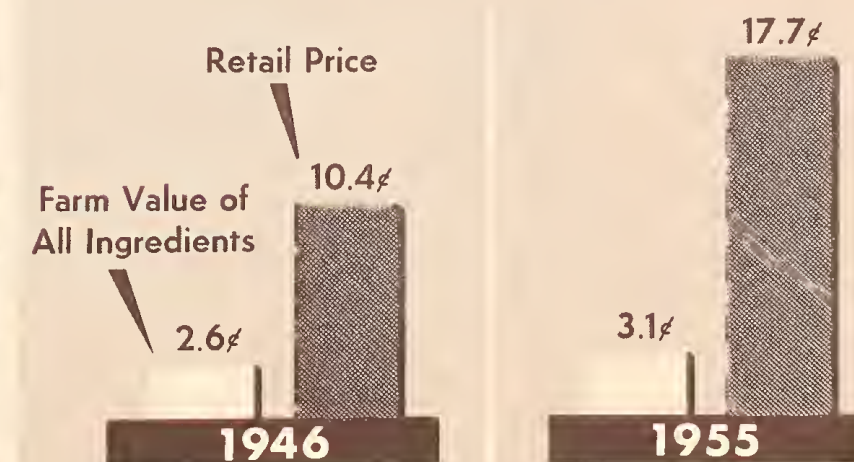
Av. Price  
in 1955,  
17.7¢



\* Includes grain handling and transportation

AMS NEG. 3076-56 (2)

## INCREASE IN FARM VALUE OF INGREDIENTS AND RETAIL PRICE OF WHITE BREAD



AMS NEG. 3077-56 (2)

# Consumer Preferences Among Bakers' White Breads

By Milton Jacobs

Here's an Agricultural Marketing Service preference study of interest to bakers of white pan bread and to the industries supplying the ingredients for making these breads.

A study of consumers' preferences among white pan breads of different formulas in Rockford, Ill., resulted in the following findings:

A significant increase in the preference for the bread resulted -

- \* When the specific volume (weight per cubic inch) of the bread was increased from 7 to 10 cubic inches per ounce, making a lighter, fluffier bread.
- \* When the sucrose content was increased from 2 to 7 percent.
- \* When 4 percent of nonfat milk solids was included in the making of the bread.

When the nonfat milk solids was increased to 8 percent there was no significant increase in consumer preference from the bread made with 4 percent nonfat dry milk solids. Bread made without any nonfat milk solids received a lower preference rating than any of the other breads tested. The study also showed that when the lard content was increased from 3 to 5 percent there was no significant affect on preferences.

The bread representing the commercial standard (high in specific volume and sucrose, 3 percent lard, and 4 percent nonfat milk solids) was among the preferred breads.

## Tested Breads of Different Formulas

The study was made to determine consumer preferences among white breads of different formulas, the pattern of bread use, and homemakers' opinions about bakers' white pan breads. It was believed that if marked preferences existed for particular formulations, the baking industry might apply the knowledge of such preferences in baking breads that would have greater consumer acceptance, and thus halt or reverse a downward trend in household use of bread.

Breads used in the Rockford experiment were selected on the basis of discrimination tests by experts in the American Institute of Baking and by a household panel of consumers in Alexandria, Va. The purpose of the discrimination tests was to determine the sets of breads that would be submitted for consumer preference tests, breads that could be distinguished from each other.

## Pattern of Bread Use

Practically all of the homemakers sampled in Rockford serve bread at each of the three meals of the day. But in a sizable proportion of these households, 25 percent, there were family members who sometimes did not eat bread when it was served.

More men than women ate bread served at mealtime in the households surveyed. Men and women passing up the bread plate were usually over 20 years of age. But a good percentage, at least 1 out of 10, of children under 12 years of age also pass up the bread plate at some of their daily meals.

As expected, many of the men and women who do not eat bread at every meal were either trying to take off weight or avoid putting on any more pounds. An almost equal percentage of men and women did not like bread with their meals. A smaller percentage have a habit of eating bread only at certain meals.

More homemakers serve bread for breakfast than for lunch and dinner. More than half of the homemakers used bread in packed lunches. About half of the homemakers served bread in between-meal lunches. The income of the family did not appear to be related to whether or not bread was ordinarily served at the various times of the day.

The homemakers surveyed were using a variety of loaf breads. More than 95 percent of the homemakers reported buying white loaf bread. About 50 percent bought whole wheat and about the same proportion bought rye bread. Smaller proportions of the homemakers reported buying French or Vienna bread (36 percent), raisin bread (32 percent), and miscellaneous other kinds of loaf breads (20 percent).





# Fluming Potatoes Cuts Handling Costs

By Richard S. Claycomb

Commercial warehousemen marketing washed potatoes can reduce handling costs by using a flume system to move potatoes from storage areas to conveyors or elevators feeding onto the packing table. The flume system also helps in removing dirt from the potatoes. AMS research at the Red River Valley Potato Research Center

indicates that the saving in one season by this handling method is enough to buy the pump and pipe for a flume system.

Washed potatoes command a better price than unwashed potatoes of the same variety (MARKETING ACTIVITIES, December 1955). But complete conveyor lines or barrels and hoists used between bulk storage and packing lines are expensive to own and operate. They leave dirt and trash. To get rid of the dirt and trash involves additional expense.

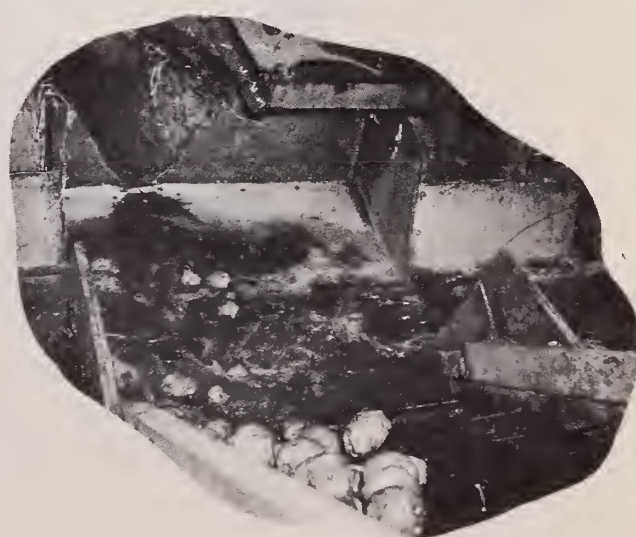
Flumes cost only \$3 to \$5 per foot. A portable conveyor costs from \$20 to \$50 per foot. Fluming and elevating potatoes from basement storage to packing equipment caused 1 percent grade injury. And, all handling costs amounted to only 1.5 cents per hundredweight of potatoes flumed. Other methods have caused from 1 to 3.4 percent grade injury to potatoes and cost approximately 5 cents per hundredweight to move them from bulk storage to packing line.

In a typical flume installation 1 worker usually supplants the 4 or more workers used when potatoes are "forked" onto conveyors or into barrels.

Dirt stored with 30,000 bushels of potatoes at the research center costs less than \$50 to remove by flume and pump. Dirt and trash stored with the same amount of potatoes and left in storage by other handling methods cost \$800 to remove.

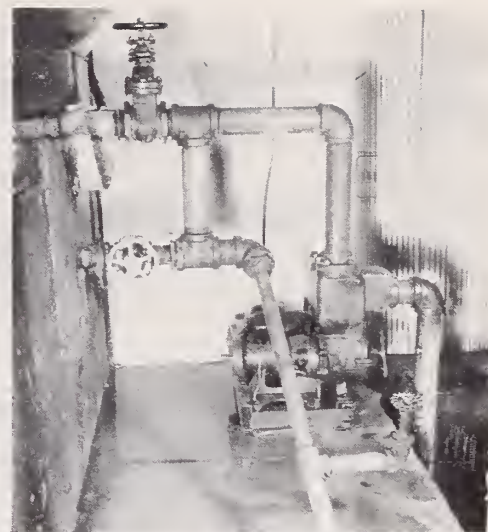
Fluming is economical not only for small operations that handle 75 hundredweight per hour but also for warehouses that currently flume 1,000 hundredweight per hour. One western warehouse is planning a flume system having a capacity of 2,000 hundredweight per hour for the 1956-57 season.

One of the more popular systems has



concrete flumes from the storage area to a sump or reservoir where potatoes go from the flume outlet onto a rod conveyor. The conveyor also serves as a feed regulator in getting the potatoes to a vertical elevator. This method is illustrated in the photo on page 12 (bottom).

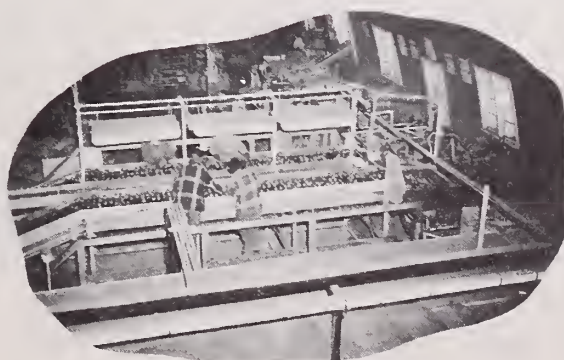
A trash-type pump, shown at the right, recirculates water through a pipe from the sump back to the storage area. A section of 6-inch-diameter canvas hose directs the stream of low-pressure water at the foot of the piled potatoes. Potatoes are washed over a gently sloping floor into the flume. Sand bags--4 inches thick, 4 feet in length, and easily portable--keep potatoes from rolling out of range of the hose. This process is illustrated in the upper lefthand corner of page 12.



It is important to flume potatoes slowly, no faster than 60 feet per minute, if the flumes are not very smooth. Rough concrete or sharp stones in the flume will injure rapidly moving potatoes. The flume section shown in this article will safely carry up to 150 hundredweight per hour, with 300 gallons per minute pump capacity, and up to 600 hundredweight per hour, with a pump capacity of 600 gallons of water per minute.

It is good practice to slope flumes 1 inch for each 15 feet of length and to provide an extra inch of fall at each turn. Floors slope from walls toward flumes 1 inch in 6 feet. A sloping flume cast in a level floor becomes deeper as it nears the sump. A flume cast in the floor of the same slope has a constant depth and is simpler to form and pour than a variable-depth flume.

Fluming water is recirculated unless large quantities of waste water can be easily disposed of and low-cost water is available. The sump, used for recirculated water reservoir, is large enough to hold an accumulation of mud and enough water to supply the pump from the time it is first started until the water returns down the flume with potatoes from the storage area. An overflow and waste pipe prevent the sump from overflowing when the pump stops and water continues to drain from the emptying flume. Accumulated mud is pumped from the sloping sump floor to a disposal field, waste ditch, or storm sewer.



# New Ideas Needed For Hatchery Waste

By Humbert S. Kahle

Hatcherymen are looking for new ideas on hatchery waste disposal!

They need outlets for hatchery waste, with sufficient returns to offset handling costs. They also need a small-scale drier to sterilize and process hatchery waste for storage in small quantities.

The waste from hatcheries primarily consists of clear rejects or infertile eggs and dead embryos or chicks. Total volume of waste is quite large. AMS economists estimate that there were nearly 7,000 hatcheries operating during a recent year. Nearly 2 billion chicks were hatched. And about 3 of 10 eggs set were rejected during incubation period.

For individual plants, the volume of waste materials is relatively small--when measured in tons of feeding materials or byproducts. Probably no more than 2 out of 10 hatcherymen produce a ton of waste per hatch.

Recent AMS studies show promise for effective waste disposal in poultry slaughtering plants (MARKETING ACTIVITIES, March 1955). But few hatcherymen have such opportunities. While the value per pound of waste is about the same for hatcheries and poultry processing plants, the volume of waste from hatcheries usually is too small to justify salvage.

In past years, infertile eggs could be marketed. Some hatcherymen candled eggs during the first 72 hours to separate the clear rejects. But action by the Food and Drug Administration classified these eggs as inedible. Consequently, candling is seldom carried on during this period of incubation.

Some hatcherymen candle on the 18th day of incubation. Their decision to candle depends upon the type of incubators, facilities available for and costs of candling, the need for space in the machines, and the work load of available employees. Where candling is practiced, trays are consolidated to avoid too much air space. The infertile or clear rejects accumulated sometimes are sold to tanners or to manufacturers of shampoos. In many instances, the returns from such sales, 60 cents to \$2.50 per case from shampoo manufacturers and \$2.50 to \$3 per drum from tanners, scarcely pay for candling labor.

Hatchery waste can be converted into a feed product. Its analysis will approximate 24-percent protein, 18- to 20-percent calcium, and 10-percent fat. This material can be fed to poultry or animals with satisfactory results. It also can be used as a fertilizer. But relatively little waste is so used, because there usually is no income from it.

Hogs probably are the largest outlet for hatchery waste. In some areas, farmers will relieve the hatcheryman of the burden of waste disposal; but no payment is made for the waste. Hatcherymen who feed their own hogs benefit from the feeding operation. In some instances, hatchery waste is used as an ingredient in feeds for pets or fur-bearing animals.

Where outlets for hatchery waste are not available, hatcherymen must rely on public garbage disposal facilities, such as the city dump or incinerator, or they can dispose of it themselves. They can spread the waste on farm land as fertilizer, dump it in suitable spots, or bury it. Hatchery waste, of course, must be plowed under as it is spread, or buried. It can become offensive and create a problem in public relations or with health authorities.

To avoid such problems, a few hatcherymen have experimented with garbage disposal units and discharged the material into drains or sewers. But this method has clogged drains. Other hatcherymen have used their own incinerators. But this involves considerable expense.

The methods of disposal mentioned in this article are not practical solutions to the problem of hatchery waste. Hatcherymen need outlets for this waste material offering sufficient returns to offset handling costs. Any solution of their problem also must include provisions for sanitation and the fumigation of waste materials to prevent the spread of pullorum, typhoid, and other diseases that are borne in eggs.

Any solution of the problem also must provide for the preservation of the material or for processing it into storable form. Any salvage program developed must comply with existing laws and regulations on the disposition of hatchery waste.



Three out of 10 eggs set prove to be infertile or develop chicks that fail to survive (right foreground).

OFFICIAL BUSINESS

## Melons Keep Well on Track in Ventilated Refrigerator Cars

By J. Kaufman

The ventilated refrigerator car is as satisfactory for watermelons as the ventilated box car even when watermelons are held for several days on track at destination, according to AMS researchers.

Many watermelon shippers and receivers are concerned over the decline in supply of ventilated box cars. They are of the opinion that watermelons in ventilated box cars are kept cooler than those in refrigerator cars, even with vents open, when the cars are held over a weekend at the terminal markets. They need not be concerned.

In a series of tests, conducted with Florida-grown, Charleston Gray melons during June 1955, in New York City and vicinity, it was found that there generally was more temperature fluctuation in the ventilated box car than in the ventilated refrigerator car. Because of its insulated construction, the ventilated refrigerator car maintained more uniform temperatures. The slight differences in inside air temperatures between the 2 types of cars were reflected in average differences of only 1 degree in the watermelon temperatures.

